

**Aircraft and Vessel Repair and Maintenance****FY2006 Request: \$2,314,300****Reference No: 6121**

**AP/AL:** Appropriation  
**Category:** Public Protection  
**Location:** Statewide

**Project Type:** Renewal and Replacement**Contact:** Dan Spencer, Director, Administrative Services**House District:** Statewide (HD 1-40)**Contact Phone:** (907)465-5488**Estimated Project Dates:** 07/01/2005 - 06/30/2006**Brief Summary and Statement of Need:**

The Department of Public Safety annually requests repair and maintenance funds for the DPS aircraft and vessels. These funds are for the repair, replacement and maintenance requirements of this department's aircraft and vessel fleet. For example, the funds will be used to rebuild vessel and aircraft engines and components when they reach the limits of safe useful life. Large marine diesel engines and aircraft engines require expert vendors to rebuild them. Many other components of vessels and aircraft must be maintained or replaced routinely to ensure safe operating conditions and to comply with various safety regulations.

<b>Funding:</b>	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	Total
Bond Funds	\$2,314,300						\$2,314,300
Gen Fund		\$1,830,007	\$1,864,778	\$1,900,209	\$1,936,313		\$7,531,307
<b>Total:</b>	<b>\$2,314,300</b>	<b>\$1,830,007</b>	<b>\$1,864,778</b>	<b>\$1,900,209</b>	<b>\$1,936,313</b>	<b>\$0</b>	<b>\$9,845,607</b>

<input type="checkbox"/> State Match Required	<input type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input type="checkbox"/> Phased - underway	<input checked="" type="checkbox"/> On-Going
0% = Minimum State Match % Required		<input type="checkbox"/> Amendment	<input type="checkbox"/> Mental Health Bill	

**Operating & Maintenance Costs:**

	<u>Amount</u>	<u>Staff</u>
Project Development:	0	0
Ongoing Operating:	0	0
<u>One-Time Startup:</u>	<u>0</u>	<u>0</u>
Totals:	0	0

**Additional Information / Prior Funding History:**

Sec 1, Ch 159, SLA 2004, \$749,600  
 Sec 1, Ch 82, SLA 2003, \$1,652,400  
 Sec 1, Ch 1, SLA 2002, \$1,200,000  
 Sec 1, Ch 61, SLA 2001, \$900,000; Sec 74(c), Ch 61, SLA 2001, \$300,000  
 Sec 1, Ch 135, SLA 2000, \$1,063,780  
 Sec 100, Ch 2, SLA 1999, \$975,000. Sec 131, Ch 139, SLA 1998, \$1,221,500.  
 Sec 82, Ch 100, SLA 1997, \$600,000 Sec 100, Ch 123, SLA 1996, \$750,000  
 Sec 135, Ch 103, SLA 1995, \$750,000 Sec 10, Ch 4, SLA 1994, \$800,000

**Project Description/Justification:**AIRCRAFT REPAIRS

This project allows for some of the yearly purchase of equipment needed to replace worn-out or obsolete equipment such as radios, landing gear, etc. It will purchase overhauls and repairs to department aircraft airframes, landing gear, and engines on an annual schedule. This is necessary to ensure the aircraft are airworthy, safe, and dependable.

For the department to carry out its public safety, law enforcement, and search and rescue responsibilities, it is essential that its aircraft are maintained in an airworthy, safe, and dependable condition. A minimum level of flying hours must be

maintained to meet the department's enforcement objectives. Without adequate aircraft support, many aspects of the Alaska State Troopers' public safety and wildlife law enforcement efforts would be seriously impaired.

The Division of Alaska State Troopers Aircraft Section has complete maintenance responsibility for all DPS aircraft, including maintenance and replacement of engines, propellers, airframes, and electronics. FAA requirements, frequent maintenance, parts replacement, and re-fabrication are required. Adequate funding is essential to maintain a regularly scheduled overhaul and repair cycle for department aircraft. Routine aircraft maintenance is especially critical as the time between airframe overhauls increase. Cessna aircraft and Piper Cubs should receive an overhaul of the airframe every 7 years, especially when operating in a corrosive saltwater environment. In fresh water and inland areas, these airplanes should be overhauled every 14 years, or 5,000 hours, whichever comes first. Any corrosion renders the aircraft no longer airworthy by manufacturer's standards and FAA regulations. Overhauling the airframes and landing gear will extend the life of the equipment and ensure a safe structural condition of the aircraft.

#### VESSEL REPAIRS

This project allows for some of the needed repairs, conversions, servicing, and maintenance for the Patrol Vessel (P/V) Stimson and the smaller vessels to ensure their safe and dependable operations during FY2006 and beyond. Routine preventative and annually scheduled maintenance for vessels of all sizes is necessary and cost efficient. As the operational life of some of the vessels is extended, maintenance becomes critical to the safety of the vessels and the crew. This project also allows for the purchase of equipment needed to replace worn out or obsolete equipment such as marine radios, global positioning systems, outboard engines, etc., as well as establish replacement dollars for vessels determined to be beyond economic repair. This is necessary to ensure that DPS vessels are seaworthy, safe, and dependable, meeting the needs of the public safety mission.

The state fisheries are changing and patrol emphasis for the region's smaller vessels are taking on new roles, including increased patrols relating to federal marine enforcement and Homeland Security concerns. All vessels are used for commercial fisheries enforcement and other trooper duties including search and rescue missions. Many of the larger vessels patrol the high seas all year, from Southeast Alaska to the Gulf of Alaska to the Bering Sea, in all weather and sea conditions. To patrol these fisheries in safe and dependable vessels, the division needs to provide a planned and scheduled maintenance program. The increasing demand in operations will also impact small vessel maintenance needs.

The department has also expanded its role with the inclusion of the federal Joint Enforcement Agreement, Homeland Security, and boating safety enforcement concerns. This responsibility covers the largest coastline in the country.

Maintaining the fleet is an ongoing process requiring the division to forecast needs based on prudent mariner practices, equipment manufacturer recommendations, and normal wear and tear. Deferred projects are weighed against newer concerns to determine the final priority listing for needed maintenance.

The majority of the smaller vessels, 23 feet and larger, operated and maintained by the department are quite old. Of the 18 operable vessels, 8 have seen less than 9 years of service. Nine vessels are 10 years or older with two being over 17 years in age. As the age of a vessel increases, so do maintenance and repair costs and the frequency of breakdowns. Sufficient funding must be available to maintain the vessels on a regular schedule.

The 156' Dutch Harbor based P/V Stimson is the largest vessel in the fleet and the only enforcement vessel in its class. It requires substantial maintenance to maintain its systems. The Kodiak based P/V Camai, the Cordova based P/V Churchill, and the Ketchikan based P/V Enforcer are the newest large members of the fleet and are expected to require only the standard annual inspections and safety equipment updates. Vessels need to be scheduled into shipyards four months or more in advance due to demands for service and the time needed to advertise and select successful bidders.

The department has implemented a program to upgrade the hull systems on the larger vessels, such as paint, zinc's, and valves to allow the dry-docking of the larger vessels to be extended from two years out to three, possibly even four years. The P/V Woldstad completed this process in FY2004 and the Stimson is scheduled to complete the process in FY2005.

#### **DOCUMENTATION OF ESTIMATED CAPITAL COSTS**

The information below is based on projected maintenance needs at the time this document was written. Changing circumstances, equipment failure, etc., may result in reallocation of funds to within the aircraft and vessel fleet as needed.

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\$ 3,390

**GPS 296-** to be used by the pilots at Palmer Post and Big Lake Post for aircraft patrols. They are the state of the art with moving color maps, clear bright display and most importantly it is very user friendly. The use of these GPS units would enhance the effectiveness and safety of the pilots by giving them information about the terrain features and landmarks, marking locations easily, and providing airport data.

AIRCRAFT REPAIRS

1. Prop Overhauls-King Air (2)	\$ 40,600
2. Engine Overhaul-PT6 (Caravan 70715)	200,000
3. C-185 Rebuilds (1)	43,190
4. PA-18 Rebuilds (3)	103,500
5. C208 (N1232Y) Initial Mods	127,517
6. TAWS Installation-4 Mandatory	74,000
7. ASTAR FLIR	217,703
8. GPS Fleet Standardization (C-185, PA18, qty-15)	100,500
9. 1ASTAR doors (2)	29,20
10. 185 Amphibs ADQ	60,000
11. ANR Headsets-Fleet (50)	15,000
12. NVG acquisitions (1)	<u>15,000</u>

**AIRCRAFT REPAIR / OVERHAUL TOTAL \$1,029,608**VESSEL REPAIRS

## Southwestern Vessels:

1. <i>P/V Stimson</i> shipyard repairs	359,000
2. <i>P/V Woldstad</i> maintenance (power block modifications, generator overhaul, etc)	228,900
3. <i>P/V Camai</i> maintenance (haul out, paint bottom, etc)	71,500
4. Medium-sized vessels, annual maintenance	4,500

## Southcentral Vessels:

1. <i>P/V Augustine</i> (haul out, paint bottom, engine overhaul, etc)	9,300
2. <i>P/V Churchill</i> (haul out, paint bottom, spare parts, etc)	22,500
3. Medium-sized vessels, annual maintenance	56,000

## Central District Vessels:

1. Medium-sized vessels, annual maintenance	47,500
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## Northern District Vessels:

1. Outboard replacements, trailer replacements	36,500
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## Southeast Vessels:

1. <i>P/V Enforcer</i> (haul out, engine/crane inspections, paint, skiff outboards)	65,500
2. Medium-sized vessels, outboard/trailer replacements, inspections	83,000

## Vessel Personnel Training

52,000

## Contract Obligations:

1. Maintenance Contract	25,000
2. Marine architect	15,000

VESSEL REPLACEMENTS:

1. Patrol skiffs for Juneau and Ketchikan posts, 19' to 22' NAIAD or Safeboats Current vessels have damaged bottoms, resulting in waterlogged material, making the vessels heavy and dangerous in rough water.	110,000
2. River boat for Big Lake post, 18' to 20' flat-bottom or semi-v aluminum hull	25,000

State of Alaska Capital Project Summary

Department of Public Safety

FY06 Governor's Capital Budget

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with outboard. The 18' Greyling boat currently in use is 15 years old, constructed of heavy duty welded aluminum, and difficult to maneuver. The current outboard motor has failed twice in the past six months.

3. River boat for Big Lake post, Roughneck 17/60 tunnel style with outboard. The current 18' Loweline Olympic w/ 70 hp outboard Johnson jet is 20 years old. The hull has become dented causing difficult steering.	16,600
4. Boat/outboard replacement and replace two 18' river boats/trailers in Tok and Delta to include two jet-powered outboards. Current boats are more than 20 years old. Boats are used primarily for search and rescue, flood patrols, and resource patrols.	40,000
5. Inflatable 14' , four-person watercraft, with 10 HP motor, for Palmer post	4,500
6. Communications equipment: Satellite dispatch mobile system for installation on <i>P/V Compliance</i> and <i>P/V Sentry</i> .	<u>12,400</u>
<b>VESSEL OVERHAUL/REPAIRS TOTAL</b>	<b>\$1,284,700</b>
<b>TOTAL CIP COSTS</b>	<b>\$2,314,300</b>